

CLAIMS:

1. Polyvinyl alcohol fibers having a flattened cross-sectional profile and having a mean thickness D (μm) that satisfies the following formula (1):

$$0.4 \leq D \leq 5 \quad (1),$$

5 wherein

$$D = S/L;$$

S indicates the cross-section area (μm^2) of the fibers; and

L indicates the length (μm) of the major side of the cross section of the fibers.

10 2. Polyvinyl alcohol fibers as claimed in claim 1, which satisfy the following formula (2):

$$10 \leq L/D \leq 50 \quad (2)$$

wherein

D indicates the mean thickness (μm) of the fibers; and

15 L indicates the length (μm) of the major side of the cross section of the fibers.

3. Polyvinyl alcohol fibers as claimed in claim 1, wherein one end or both ends of the flattened cross-sectional profile of the fibers are branched.

20 4. Polyvinyl alcohol fibers as claimed in claim 1, which contain from 0.01 to 30 % by mass of a layered compound having a mean particle size of from 0.01 to 30 μm .

5. A method for producing a dry-process nonwoven fabric, which comprises: applying a water jet of 30 kg/cm^2 or more to a web that contains the fibers of claim 1,

25 or

needle-punching the web to a punching density of at least 250 kg/cm^2 to thereby fibrillate the fibers.

30 6. The method as claimed in claim 5, wherein said fibers satisfy the following formula (2):

$$10 \leq L/D \leq 50 \quad (2)$$

wherein

D indicates the mean thickness (μm) of the fibers; and

L indicates the length (μm) of the major side of the cross section of the fibers.

7. The method as claimed in claim 5, wherein one end or both ends of the flattened cross-sectional profile of the fibers are branched.

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8. The method as claimed in claim 5, wherein said fibers contain from 0.01 to 30 % by mass of a layered compound having a mean particle size of from 0.01 to 30 μm .

9. A dry-process nonwoven fabric obtained according to the method of claim 5.

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10. The nonwoven fabric as claimed in claim 9, wherein said fibers satisfy the following formula (2):

$$10 \leq L/D \leq 50 \quad (2)$$

wherein

15 D indicates the mean thickness (μm) of the fibers; and

L indicates the length (μm) of the major side of the cross section of the fibers.

11. The nonwoven fabric as claimed in claim 9, wherein one end or both ends of the flattened cross-sectional profile of the fibers are branched.

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12. The nonwoven fabric as claimed in claim 9, which contain from 0.01 to 30 % by mass of a layered compound having a mean particle size of from 0.01 to 30 μm .

25 13. A method for producing a wet-process water-jet nonwoven fabric, which comprises:

applying a water jet of 30 kg/cm^2 or more to base paper prepared from a slurry that contains the fibers of claim 1 as a part of the fibrous component thereof, to thereby fibrillate the fibers.

30 14. The method as claimed in claim 13, wherein said fibers satisfy the following formula (2):

$$10 \leq L/D \leq 50 \quad (2)$$

wherein

D indicates the mean thickness (μm) of the fibers; and
L indicates the length (μm) of the major side of the cross section of the fibers.

15. The method as claimed in claim 13, wherein one end or both ends of the flattened

5 cross-sectional profile of the fibers are branched.

16. The method as claimed in claim 13, wherein said fibers contain from 0.01 to 30
% by mass of a layered compound having a mean particle size of from 0.01 to 30 μm .

10 17. A wet-process nonwoven fabric obtained according to the method of claim 13.

18. The nonwoven fabric as claimed in claim 17, wherein said fibers satisfy the
following formula (2):

$$10 \leq L/D \leq 50 \quad (2)$$

15 wherein

D indicates the mean thickness (μm) of the fibers; and

L indicates the length (μm) of the major side of the cross section of the fibers.

19. The nonwoven fabric as claimed in claim 17, wherein one end or both ends of the

20 flattened cross-sectional profile of the fibers are branched.

20. The nonwoven fabric as claimed in claim 17, wherein said fibers contain from
0.01 to 30 % by mass of a layered compound having a mean particle size of from 0.01 to 30
 μm .

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